



Flying Blind Isn't An Option For OTT Video Streamers

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The pace of direct-to-consumer video service developments only seems to be accelerating as major content providers look to tap into the remarkable growth subscription video-on-demand (sVOD) has seen in recent years.

For example, this year Disney announced its plans to launch [Disney+ in mid-November](#), offering streaming consumers access to more than 7,500 TV episodes and 500 films. Then in mid-September, NBCU followed suit announcing it would take a bite of the D-2-C apple. In April 2020, the network plans to roll out Peacock, a streaming video service offering customers 15,000 hours of content.

The numbers tell the reason why traditional media companies, new entrants and even specialty publishers are racing to take advantage of the D-2-C video streaming market.

According to research specialist Futuresource Consulting, in 2018 sVOD recorded an estimated 30 percent growth—for the sixth consecutive year—in its share of where consumers are spending their entertainment dollars.

"This continued growth means that consumer spend on sVOD in 2018 exceeded that of total transactional video (sell-through & rental) for the first time," said David Sidebottom, principal consultant at Futuresource Consulting.

A more tightly focused look supports the consultancy's macro perspective. As the year began, Netflix reported 139 million subscribers worldwide. Hulu, too, reported an impressive 25 million subscribers in 2018—an increase of 48 percent year over the previous year. Ditto CBS which announced big numbers and bigger goals still for its *All Access* streaming service with 8 million subscribers as of February 2019 and a goal of 25 million by 2022.

What all of this adds up to is massive growth in online video subscriptions for direct-to-consumer streaming services. As Parks Associates' OTT Video Market Tracker Service reveals, subscriptions now account for 86 percent of all internet spending on TV and movies—up from just over half in 2012.

"To keep consumers spending at this higher level, services will have to consistently deliver volumes of compelling content within an engaging user experience," said Brett Sappington, senior research director and principal analyst, Parks Associates.

ENSURING ENGAGING EXPERIENCES

Many direct-to-consumer video services, however, rely on third-party content delivery networks (CDNs) to stream that compelling content to customers, leaving them potentially blind to network problems that could mean the difference between customer engagement and customer estrangement.

"Unlike a traditional content delivery model in which programmers reach their audience via a television network or MVPD operator, which clearly understand the value of monitoring the quality of content delivery and the associated costs of doing a poor job, D-2-C creates an entirely new paradigm in which the content owner is the agency responsible for ensuring quality," says Telestream director of product management Ken Haren.

"In the past, the operator owned the network they were delivering the content through," he says. "Now the programmer who is doing a direct-to-consumer service is leveraging

KEY TAKEAWAYS:

- 1 Direct-to-consumer (D-2-C) video streaming is experiencing remarkable growth, posting subscriber numbers in the tens of millions and beyond.
- 2 Success not only depends on the entertainment value of content but, just as importantly, a high quality of service and experience.
- 3 D-2-C services rely on third parties to deliver content and must take steps to achieve visibility into content delivery network performance to keep customers happy.
- 4 Telestream OptiQ Monitor allows D-2-C streaming services to monitor anything post-origin server.
- 5 The monitoring-as-a-service solution leverages the proven performance of Telestream iQ monitoring technology and soon Tektronix video monitoring.

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With Great Opportunity Comes Great—and Perhaps Unexpected—Responsibility

By Ken Haren

Director of Product Management, Telestream

There is a dramatic paradigm shift occurring in how the public consumes television shows, live events like sports and awards programs and movies.

Whether streaming directly to smart TVs, connected devices such as Amazon Fire TV or Roku, media tablets, smartphones or laptops, video is reaching the public in a manner that at the turn of the century would have been unimaginable. So popular is streaming among the public that Parks Associates estimates 70 percent of all U.S. broadband households subscribe to at least one streaming service.

Competing for all of those eyeballs and the subscription dollars that flow from those OTT subscribers were some 226 direct-to-consumer (D-2-C) video streaming services in the United States as of February, according to the market research organization.

On one level, the success or failure of those D-2-C services rests on the popularity, relevancy and entertainment value of the content they offer. However, on an even more basic level, their success depends on providing their subscribers with a quality of service and experience that they find to be acceptable. Put another way, it's got to be as good as what they're used to experiencing from a pay TV provider, be that satellite, IPTV or cable.

Unfortunately, many of these same D-2-C streaming services are in the unenviable position of handing off their content to a third party to fulfill the transaction they've made with their subscribers without having visibility into the performance of the network used to reach their audiences. What's worse, many haven't yet even realized the implications of doing so.

Where they may have once depended on a pay TV provider or broadcaster to be responsible for delivering an excellent quality of service and experience—after all it was as much in the



Kenneth Haren

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interest of those distributors to do so as the programmer—these D-2-C streaming services are now responsible for ensuring a great experience with little to no control once content leaves their origin servers.

Fortunately, a new generation monitoring-as-a-service cloud-based solution is available from Telestream called OptiQ Monitor. But before it can help, D-2-C video streaming services must come to grips with the great responsibility they have assumed to meet the quality and experiential expectations of their customers.

third-party CDNs and last mile operators to reach an audience via a network that they don't own and that they can't really deploy sophisticated monitoring tools within."

In essence, D-2-C video streaming has shifted the burden for ensuring the overall viewer quality of experience (QoE) from distribution partners and placed it squarely onto the shoulders of programmers, he explains.

In September, Telestream unveiled OptiQ Monitor, a monitoring-as-a-service solution built on the company's proven iQ portfolio of monitoring products and soon to integrate video monitoring technology it acquired with its purchase of Tektronix Video.

With OptiQ Monitor, D-2-C programmers and a growing number of new media digital pure plays have, for the first time, broad

visibility in to the health and performance of their live OTT channels as delivered through their CDN partners. The solution checks asset availability, performs real-time picture and sound quality analysis, and correlates the health of live channels at the origin with the CDN edge simultaneously across multiple geographic and network regions.

"OptiQ Monitor is really about creating synthesized user experiences simultaneously in multiple geographies and then validating performance thresholds are met, delivery challenges are identified and that the overall user experience is engaging," he says.

OptiQ Monitor enables D-2-C streaming services to take on the new responsibility of service assurance with the confidence they can quickly correct or direct traffic around any

problem that might threaten the experience their customers encounter while watching sVOD and live content, says Haren.

With OptiQ Monitor, programmers can proactively improve the health of their live streams, warm popular cache nodes and validate the availability of content before the audience begins engaging the streaming channel.

"As soon as I launch an OptiQ Monitor project, synthetic clients begin measuring the availability and health of my content both at the content origin and as delivered through my CDN partners in the locations I've requested. This way, before my event even begins, I can guarantee my CDN partners are performing optimally as my audience comes online," says Haren.

BEYOND CLIENT-SIDE ANALYTICS

Before OptiQ Monitor, the tool of choice available to programmers to measure video service health was client analytics.

“Client analytics are an important component of measuring the health of my programming but are always limited to one dimension – what’s happening in the app or what’s happening in the player,” explains Haren. “This can lead to situations where challenges are identified but cause and remedy are unknown.”

“That’s a bad position to be in because [with client-side analytics] you can’t really say with any sort of confidence to a CDN partner that they are contributing to a problem,” he says. “It is generally a difficult conversation without objective measurement and analysis detailing where and if possible why content delivery is being impinged.”

However, with OptiQ Monitor pinpointing problems quickly is as simple as swarming a problematic channel with probes in real time as needed to isolate their locations.

“The nice thing is I don’t have to buy 200 probes to make that happen. I can spin up the probes on demand and pay for them as I use them and then I shut them down,” says Haren.

Additionally, with OptiQ Monitor featuring client analytics integrations with providers such as NPAWs Youbora and Conviva Viewer Insights, programmers can now actively monitor the audience experience across multiple real-time dimensions, delivering for the first time the visibility necessary to deliver a truly exceptional viewer experience, all in a single solution.

BEFORE DELIVERY

Gaining visibility into the delivery chain to validate performance, however, is only part of the challenge facing D-2-C program streamers. “What if there is a problem occurring with the contribution encoder, or in the encoding stack somewhere or in the packager directly?” asks Haren, rhetorically.

To address those issues, Telestream is rolling out OptiQ Channel, a channel-as-a-service production environment with advanced monitoring capability to identify problems early in the channel creation process. The strategy with OptiQ Channel is to build a quality-aware integrated solution capable of reacting in real time to quality and performance analytics data – delivering a self-optimizing video infrastructure for OTT delivery.

With OptiQ Channel, the fundamental infrastructure components responsible for ingesting, enhancing, editorializing, encoding, packaging and delivering live content are, for the first time, wrapped in a comprehensive video monitoring layer. At each point in the production and delivery process, real-time analytics are being collected and OptiQ Channel users are being presented insights in an end-to-end view. Recreating the tangibility of video with cloud deployed infrastructure is a guiding principle for what OptiQ Channel delivers, and the tight integration with state of the art monitoring solutions is how this is achieved.

“These two pieces work seamlessly together so everything developed in OptiQ Monitor shows up in OptiQ Channel and vice versa,” says Haren.

“With OptiQ Channel and Monitor, companies complete that end-to-end visibility even though all of their resources are being hosted in the cloud.”

ADDITIONAL RESOURCES

“What is OptiQ?” An overview of Telestream’s new OptiQ product portfolio: <http://www.telestream.net/optiq/overview.htm>

“OptiQ Monitoring,” QoE monitoring of OTT content delivery for sVOD and live streaming content: <http://www.telestream.net/optiq/overview.htm#Monitor>

“OptiQ Channel,” instant channel creation in the cloud for live programming: <http://www.telestream.net/optiq/overview.htm#Channel>

“Telestream Introduces OptiQ Monitor at IBC 2019.” Telestream reveals details about the new monitoring product: www.telestream.net/company/press/2019-08-05-OptiQ-Monitor.htm

“Best of Show at IBC 2019 winners announced,” TVB Europe names OptiQ Monitor as a best of show winner: <https://www.tvbeurope.com/business/best-of-show-at-ibc-2019-winners-announced>

ABOUT THE AUTHOR

Phil Kurz is a contributing editor to *TVTechnology*. For more than 30 years, Phil has covered the television and non-broadcast video markets. During that time, he has served as the editor-in-chief of three different industry magazines and helped launch several successful e-newsletters on television technology-related topics. Phil also has written well over 1,000 articles, columns, and editorials on technology topics. He is a graduate of the University of Missouri-Columbia with a bachelor and a master’s degree in journalism.

ABOUT TELESTREAM

For over 20 years, Telestream® has been at the forefront of innovation in the digital video industry. The company develops products for media processing and workflow orchestration; live capture, streaming, production and video quality assurance; and video and audio test solutions that make it possible to reliably get video content to any audience regardless of how it is created, distributed or

viewed. Telestream solutions are available on premises or in the cloud as well as in hybrid combinations. Telestream is privately held with corporate headquarters located in Nevada City, California and Westwood, Massachusetts.

For company and product information, visit www.telestream.net.

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